

## 1 CONFIGURATION IN A CONFIGURABLE SYSTEM ON A CHIP

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09/419,386

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5 ABSTRACT OF THE INVENTION

6 The present invention allows a user to customize the  
7 configuration sequence of a configurable system on a chip  
8 (CSoC), thereby adding considerable flexibility to the  
9 configuration process. The present invention also provides  
10 certain features, transparent to the user, which optimize  
11 system resources and ensure the correct initialization of  
12 the CSoC. The CSoC leverages an on-chip central processing  
13 unit (CPU) to control the configuration process of the  
14 configurable system logic (CSL). Advantageously, the CSL  
15 configuration memory cells as well as other programmable  
16 locations in the CSoC are addressable as part of a system  
17 bus address space. The system bus is a multi-use structure  
18 that can be used for both configuring and reading of memory  
19 cells. In this manner, the CSoC optimizes system  
20 resources.